Biological
& Medical
Serials

The Maritime medical news

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THE

MARITIME MEDICAL NEWS

A MONTHLY JOURNAL DEVOTED TO MEDICINE & SURGERY

VOL. XVIII HALIFAX, NOVA SCOTIA, NOV. 1906. NO. 11

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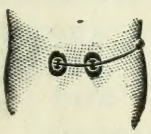

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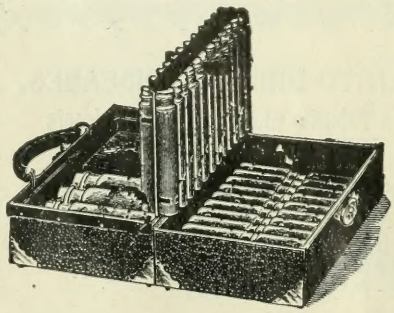

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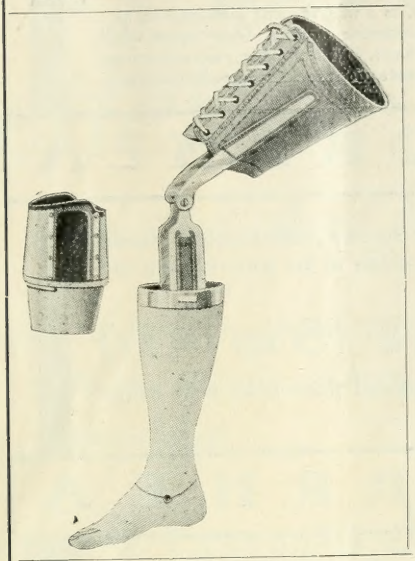

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EDITORS:

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J. W. Daniel, M.D., M.R.C.S. - St. John, N.B.
Murray Maclaren, M.D., M.R.C.S, St. John, N.B.
James Ross, M.D., - - - - Halifax, N.S.
John Stewart, M.B. - Halifax, N.S.
W. H. Hattie, M.D. - Halifax, N.S.
F. P. Taylor, M.D., F.R.C.P. & S., Charlottetown. P.E.I.
N. S. Fraser, M.B., M.R.C.S., St. John's, Nfld.

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MARITIME MEDICAL NEWS

VOL XVIII, *NOVEMBER, 1906*, NO 11

Bath Treatment of Typhoid Fever Simon Baruch declares (*Medical Record*, October 13th, 1906) that in the management of a case of typhoid fever the chief aim of the physician should be the enhancement of the patient's resisting capacity to the toxæmia which threatens his life. The damage sustained by the nerve centres is the measure by which the mildness or severity of a case of typhoid fever is gauged. Cold baths must not be regarded as cooling procedures. Cold baths prevent lethal complications by reason of their sustaining effects upon the central nervous and circulatory systems. There must be reaction following each application. By baths, nerve force must be sustained to prevent exhaustion. The cold bath has proven an efficient aid in changing the mortality statistics. The form of the bath and its temperature must be adapted to the condition of the patient.

Identification by Finger Prints J. R. Kean, in *The Journal of the American Medical Association*, October 13, describes the system of personal identification to be put to use in the United States Army. He declares that some such system is a necessity in this country, not only for convenience of military administration to purge the army of criminals, repeaters and other undesirable characters who have gained admittance through fraudulent enlistment, but also to protect the interests of the Government and the individual in case of claims against the former based on the fact of military service. It may also assist to a certain extent in the identification of the dead. The system first adopted in the United States Army (1889) was an adaptation of the pathologic division of the Bertillon system, viz., description of moles, scars, tattoos, blemishes, etc., together with certain simple measurements and physical characteristics, such as height, color of hair, eyes and skin. The complete Bertillon system was not adopted because it required the use of bulky and expensive instruments for exact measurements, and considerable practice and skill in their manipulation. This system fulfilled very satisfactorily for a small army during a decade the special purpose for which it was introduced, namely, to check the custom of "repeating," by which is meant the fraudulent re-enlistment, usually under an assumed name, of deserters and dishonorably discharged men. After the war with Spain this system was found to be inadequate. Although its use was not extended to the volunteer troops the num-

ber of transcript cards on file was over 200,000. A board was appointed Oct. 11, 1905, to investigate the various systems of personal identification now in use, and, after an exhaustive study of the subject, it recommended the adoption of the finger-print system, supplemented by a photograph and brief personal description. The reasons given by the board for preferring the finger-print system of Galten, as improved by Henry, to the anthropometric system of Bertillon are: 1. Its greater simplicity of operation. 2. The small cost of the apparatus required. 3. The fact that all the skilled work required is transferred to the central office, and so it is only there that experts are required. 4. Greater rapidity of operation. 5. Greater certainty of results. Kean gives in detail the methods of procedure and classification and states that an expert in searching for a duplicate can find it in five or six minutes if it exists in a record of 100,000 cards. This system, he states, will be very valuable in obviating the necessity of much correspondence and collection of evidence at present required to prove identity in cases coming before the War Department and the Pension Bureau. After the introduction of this system, any man who has served in the Regular Army, can at once establish his identity by placing his right forefinger on the ink pad of an ordinary rubber stamp and making a finger print below his name. Unknown dead, brought from battle fields into field hospitals, or who die there, can in this way give a record which will lead to their identification; and a copy of the finger print buried in a vial with the body will be a permanent and certain identification of it. It was expected that the new system would be put in operation soon after Oct. 1, 1906. This article is fully illustrated.

Pathogenesis and Therapeutics of Cancer

Robert Bell, writing in the *Medical Record* of October 13th, declares that among savages cancer has been proved to be nonexistent. He believes that the mode of civilized life exercises a considerable influence in its causation. It is unknown in wild animals, but it appears to assert its presence in those animals whose lives are spent in the neighborhood or under the influence of man. The writer doubts that these tumours are identical with cancer in the human subject. He believes that cancer is a disease independent of any specific agent from without. From his point of view, if a person is a gross feeder, especially if he indulges in an excessive amount of animal food, and if there is present a constipated habit which has a pernicious effect upon the thyroid gland, it may be concluded that there exist the three most important factors whose combined influence is sufficient to provoke a tendency to the development of cancer. Defective action of the thyroid gland should be supplemented by the administration of the gland of healthy animals or the active principle of the gland. Saccharomyces in the blood of cancer patients should be destroyed by salicylate of sodium.

Open-Air Treatment of Pneumonia W. P. Northrup, New York City (*Journal of the American Medical Association*), for over eleven years has been using free ventilation and fresn air treatment in pneumonia, and during the last year he has followed the practice of putting his patients in the New York Presbyterian Hospital for six hours a day out on the roof in all weather in which harsh high winds, rain and snow did not prevent. He gives histories of two cases both serious, and in one of which he thinks the patient could not have recovered under other treatment. The hospital authorities are so well satisfied of the value of this method that they are making a colossal roof garden on the medical side of the hospital to be an open-air ward for these cases. The patients most favorably affected by open-air treatment are those with severe poisoning, with delirium, partial cyanosis or deep stupor. In Northrup's experience all patients do better in cool fresh air, which can be secured in private practice by screening off a portion of a room by an open window. None have been harmed, in his observation, and some have been greatly benefited and possibly saved by the cold fresh-air treatment. If pneumonia, due to an infecting agent, is thus benefited, the value of the treatment for other infectious diseases is suggested, and, in fact, he has tried it in many others, including typhoid fever with severe bronchitis, whooping cough with bronchitis and convulsions, with excellent results. He conciders it, in fact, the ideal treatment for septic fevers. The only regulation is to keep the patient comfortable and especially to keep the feet warm.

Rheumatism in Children A. D. Blackadar, in an article appearing in the *British Medical Journal* of October 13th, states it to be his belief that rheumatism is an infectious disease, although the bacterial cause has not been sufficiently clearly worked out. Arthritic manifestations may be wanting in children, and in their place we may find chorea, tonsillitis, pleurisy, exudative erythema, epistaxis, etc. Simple muscular pain and tenderness are sometimes evidence of rheumatic infection. Of the different forms of tonsillitis, quinsy has doubtless the closest association with rheumatism. The tonsils are to be regarded as a common point of entrance of the infection, so they should be carefully and thoroughly treated. Adenoids should be removed.

Prevention of Cancer C. B. Keetley, writing in the *Lancet* of October 13th, holds that there are strong reasons for believing cancer to be due to a living organism. This doctrine affords a basis for prophylaxis. The rules which he would lay down include sterilization of food (most cancers attack primarily some part of the alimentary canal), regular cleansing and protection of nipples and genitalia, careful attention to mouth and teeth, immediate destruction of dressings and discharges from cancerous sores, prompt relief of non-malignant tumours, early removal

of doubtful tumours, abstinence from alcohol, tobacco and foods which leave waste products (and which, not being well eliminated by kidneys, bowels and skin, provoke and sustain the chronic inflammations which often pave the way for cancer), and cleanliness in every detail of the preparation of food.

❦

Abdominal Pain

In the October number of the *Practitioner* two articles on allied subjects appear; one entitled "Abdominal Pain in Disease of the Pelvic Organs," by A. Donald and J. D. Lickley, the other entitled "Some Remarks on Acute Abdominal Pain," by C. M. H. Howell. In the first paper it is stated that in chronic pelvic disorders the pain is generally in the iliac region, and is most common in cases in which acute pelvic peritonitis figures in the history. Ovarian pain is largely imaginary in many instances. It is not easy to differentiate the origin of pain, especially on the right side. If due to uterine disorder, enlargement and displacement of that organ can usually be determined; if due to endometritis, it generally disappears after curettage. Certain points on the abdominal wall, corresponding or contiguous to entrance of nerves into tissues, may be usually tender and indicate disorder of ovaries, tubes, uterus, ect.

Howell states that pain is in many instances referred to the abdomen, though it may be due to disease elsewhere. Thus pulmonary disease may at first present abdominal symptoms. Neuralgia and other nervous disorders may cause abdominal pain. Careful observation of respirations, temperature, etc., and of the character of the pain (*i. e.* whether superficial, deep, increased by pressure, etc.), are necessary to diagnosis. When diagnosis is uncertain, especially in early stages, thought should be given to peritonitis, obstruction and the various forms of colic.

❦

Autotoxis and the Neuroses

Robert Coleman Kemp read a suggestive paper before the Medical Association of the Greater City of New York, at the meeting of June 11th, entitled "The Relations of the Gastrointestinal Tract to Nervous and Mental Diseases." He described the relations of the gastrointestinal functions to toxæmia, detailing the sources of infection met with in stomach, large and small intesine, and liver. It was asserted as his belief that a variety of nervous disturbances may result from autoinfection, and that in many cases of nervous and mental diseases derangements of the gastrointestinal functions, with resulting autoinfection, may aggravate the original condition from which the patient suffered and thus create a vicious circle. His study of convulsive seizures in infants and young children resulting from improper food or from overloading the stomach has enabled Dr. Kemp to distinguish two classes of cases, the gastric and the enteric. In the former, the seizures come on a short time after eating, and are sometimes attended by an acute dilatation of the stomach, which he considers to be caused by autoinfec-

tion resulting from fermentative or putrefactive changes in the stomach. He referred to the experience of Mangelsdorf, of Bad Kissengen, who has examined four hundred cases of epilipsy and several hundred of migraine, and has found acute dilatation of the stomach just pre ceding or during the attacks. The advantage of lavage and of non-nitrogenous diet in nervous cases was dwelt upon, and the undesirability of red meats emphasized. In five cases cited by Moynihan, cure followed gastroenterostomy. This is most significant, as by thorough drainage of the dilated stomach the recurrence of autoinfection is prevented. The brilliant surgical work of the Mayos among the insane and those suffering from nervous diseases is we'l known, and Kemp believes that in certain cases of marked dilatation or ptosis of the stomach, with resulting autoinfection, surgery will in the future play an important part in relieving nervous and mental trouble.

❦

Implantation of Tumours

Sticker reports, in *Muenchener Medizinische Wochenschrift,* September 25th, a series of experiments, the results of which have led him to deduce that: 1. If a number of tumour cells are implanted in an organ a single, solitary nodule is usually developed which grows only by propagation. If the implantation is double, either in the same organ or in different organs, a solitary nodule appears in each place. 2. After a tumour has been developed from implantation a second, third, or fourth attempt to implant fails. 3. After an implanted tumour has been extirpated another implantation may be successfully performed. 4. If the implanted tumour has been only partially extirpated and the remaining portion continues to grow a subsequent implantation is without results.

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Obesity in Tuberculosis

Guilhaud (*La Clinique,* April 27th, 1906) describes a form of tuberculosis characterized by obesity. He considers this variation of the tuberculous manifestation to be due to two factors: the soil on which the infection is implanted, which he calls, with apologies, by the antiquated name of scrofulous; and the attenuated quality of the pathogenic agent, namely, Koch's bacillus. Local tuberculous lesions are generally associated with an excessive deposit of adipose tissue, and his observations lead him to the conclusion that there is a form of tuberculosis which may become the starting point of contagion all the more easily because the danger is not suspected. He regards phthisis in the obese as a curable variety of tuberculosis, remaining as it does in the condition of a local lesion, and therefore compatible with a prolongation of life. In short, paradoxical as it may appear, he has come to the conclusion that a patient infested with tuberculous bacilli may still live and grow fat. (*Epitome, British Medical Journal,* November 3.)

A New Hypnotic C. Mackh relates his experience with a new sleep producing agent in *Muenchener Medizinsche Wochenschrift*, July 31st. The new drug, which is called viferral, is a polymer modification of chloral, but lacks the caustic action of that drug It is an inexpensive drug, and acted satisfactorily in Mackh's hands in cases of insomnia unattended by pain or increase of temperature. The ordinary dose was 1 gram (15 grains), but sometimes 1.5 grams (22 grains) had to be given. No unpleasant effects upon stomach, heart or kidneys were noted, the sleep produced was usually sound and refreshing, and there was no complaint of disagreeable after effects.

Antitoxin in Diphtheria In the *Bulletin* of the Department of Health of Chicago, for October 13th, some interesting statistics are given relative to the mortality from diphtheria in the pre-antitoxin days as compared with that now being experienced. The first case to be treated with antitoxin came under observation in October, 1895, and statistics are given for the decades 1886 to 1895 and 1896 to 1905. In the first period 10,019 deaths from diphtheria were reported, or an average of 9.87 per 10,000 of population. During the second period there were 6,446 deaths from diphtheria, an average rate of 3.94 per 10,000 of population. Doubtless many deaths attributed to croup, occurring during the earlier decade, were really due to diphtheria. This view is rendered likely by the fact that a much smaller death rate from croup was recorded in the second decade, during which the aid of bacteriology made diagnosis more certain. If this supposition be correct, the showing in favour of antitoxin treatment is made still better. Taking into account the change in general population, antitoxin treatment is found to have reduced the mortality rate of diphtheria by 60 per cent., and that of diphtheria and croup combined by 70.2 per cent.

Smallpox in New Brunswick A mild and somewhat atypical form of smallpox has made its appearance in Kent County, near the border of Westmoreland County. The earlier cases were not recognized, in fact, many did not come under medical observation, and consequently quarantine was not established until ample opportunity had been given for widespread dissemination of the disease. And as many of the patients were not incapacitated from work but travelled about by rail and otherwise, it is difficult to say what limit there will be to the spread of the disease. The local boards of health are now active, however, and everyone is on the alert for the appearance of suspicious cases.

MALIGNANT ENDOCARDITIS

WITH SPECIAL REFERENCE TO TREATMENT

By ARTHUR BIRT, M. D., (Edin.)
Berwick, N. S.

(Read at meeting of Medical Society of Nova Scotia, Lunenburg, July, 1906.)

THE malignant, ulcerative, or perhaps better, infective form of endocarditis deserves the close study of the practitioner for at least three reasons: Firstly, it is by no means as rare a disease as one would suppose; secondly, its prognosis has hitherto been of the gloamiest and our therapeutic impotence most marked; and, thirdly, the prospects for removing, to some extent, this stain on our escutcheon in the near future seem to be brightening.

In a disease which is to-day rightly classed with the septico-pyæmic processes (differentiated only bp the special incidence on the endocardium), anything more than the most sketchy references to ætiology, pathology, and clinical types is of course impossible in the few minutes at my disposal.

As regards frequency of occurrence, there were 84 fatal cases in seven years (1890-'97) at St. Bartholomew's Hospital (Kanthack). Of these 61 per cent. were males and 39 per cent. females. The chief age incidence in the males was between 20 and 40, in the females between 10 and 30 years.

Amongst the predisposing causes of infective endocarditis I need hardly remind you that previous valvular disease is by far the most potent factor. Thus Coupland, out of 69 cases, noticed 61 in which the valves had been previously affected; and Osler states that in three-fourths of his cases sclerotic changes persisted in the valves.

The exciting causes are very numerous, since they practically embrace all those that may set up the more benign forms of endocardial lesion. Mod rn bacteriology has swept away the clear-cut lines of distinction that used to be drawn between the two. A large class of the general infective diseases may develop malignant endocarditis as a more or less prominent incident; and the bacterial flora discovered on the damaged valves has been of the most varied character. For my purpose it may be enough to recall that in the great bulk of cases the pus-producing organisms (streptococcus pyogenes, staphylococcus aureus, pneumococcus, gonococcus) either alone or in mixed culture, are found in by far the greater number of cases whether postrheumatic or not; a fact that will be recognized to have important bearings on the treatment by modern serum methods. We must then be on the lookout for latent or declared endocarditis of the infective form in such varied conditions as scarlet fever, acute osteomyelitis, middle-ear disease, the sepsis of the puerperal state, carbuncle and dysentery, whilst recollecting the special

proclivity of pneumonia and, above all, acute rheumatic manifestations to such complications or developments. In exceptional cases it seems evident that the blood contains poisons so virulent that the endocardium is attacked without previous damage existing.

Our wider outlook as to its bacteriology has naturally been accompanied by a tendency to simplify as far as possible the many clinical types into which the disease was formerly sub-divided, since it is now apparent that the old problem of the relative virulence of the invading germ and the resistence of the soil, is all that often separates the acute or infective from the sub-acute or verrucose, and the chronic or contracting forms of endocarditis.

I frankly admit that the limited number of cases that have come under my personal observation within the last 18 years have all ended fatally. The last of these, as illustrating perhaps the commonest form in which the practitioner may meet the disease. I here briefly report:

Case of Infective Endocarditis (of prolonged duration) grafted on pre-existing mitral disease.—A single woman, aged 43, of good physique and in fair circumstances, had suffered from sub-acute rheumatic manifestations at intervals for about a year. The tarsal joints and the shoulders were affected. Rest, local applications and salicylates had always been effective. A mitral lesion, indicated by a blowing systolic murmur conducted to axilla, but accompanied by only trifling cardiac enlargement, and showing good compensation, had been noted two years previous to this report. She had enlarged fibroid tonsils, but had declined operation. No definite rheumatic history was obtained beyond that of feverish sore throats and "growing pains" in childhood. She had suffered from dyspepsia, and hyperchlorhydria was present. In October, 1904, she complained of some general malaise and looked a trifle sallow. The heart, however, was steady, the pulse regular and of good tension, the murmur clear and the cardiac limits unaltered. On October 23rd, whilst out walking, she was suddenly seized with severe pain in the left lower thorax, and vomited. Fever and splenic tenderness and enlargement were noted later, but no friction. Splenic embolism was diagnosed. Recovery followed in about two weeks. On January 20th, 1905, she developed a rheumatic attack in one tarsus, ankle and shoulder, and the digestion and general health were impaired. On August 1st, whilst attempting to transact some business at the bank, she was seized with right hæmiparesis and aphasia. On rallying from the shock the patient showed almost complete loss of power in arm, leg and lower face, with exaggerated deep reflexes. She could only articulate one or two simple words very indistinctly. As time went on, power of speech returned, but she was left with a degree of paraphrasia, misplacing and misusing words, yet conscious of her blunders. (Wernicke's conduction aphasia from embolism into the sylvian artery.) She understood what

was said, and could write correctly as far as could be judged. She indicated that headache was felt in left temporo-parietal region, which was also tender on light percussion. A decided increase of surface temperature was noted on left side from brow above to mid-thoracic region. This was sharply limited by the middle line of body. Three weeks after this cerebral "insult" the temperature began to run up, the fever showing a remittent type and steadily increasing in severity as the case progressed. Chills and profuse sweats were soon superadded. The heart now showed moderate dilatation both to right and left, the pulse rate rose, and dicrotism became well marked; but, beyond a slight increase in harshness and perhaps in its conduction area, no change in the original apical systolic murmur was noted. Marked enlargement of spleen with attacks of pain and tenderness seemed to indicate fresh infarcts in that organ; and pain in the loins with traces of blood and albumin in the urine showed that renal infarcts were also occurring. Two months after the "stroke" the patient showed the characteristic facies and symptoms of a general sepsis. And emaciation was marked and petechiæ appeared on the lower limbs. The fever ran to 102.5 or 103 F. at night, and chills and sweating were very troublesome. Ophthalmoscopic examination was negative. A well marked leucocytosis with slight excess of eosinophiles was observed, and the hæmoglobin fell to 50 per cent. or less. On November 5th, 1905, she had another stroke. Complete motor aphasia and hæmiplegia resulted, and she began to sink more rapidly. A fatal termination from cardio-respiratory failure ensued December 4th, or about four months from the time that the disease took on its more malignant aspect.

TREATMENT.—The absence of an autopsy and of a bacteriological examination of the blood intravitam is to be regretted, since these might have demonstrated the probability or otherwise of marked improvement under the treatment I shall later suggest. Amongst the remedies tried at various stages were aspirin, iron and arsenic ,iodides, sulphocarbolates, blistering, normal saline and antistreptococcus serum. The latter, however, was unfortunately given too late and in inadequate doses, so the trial was valueless.

PROPHYLAXIS.—The prophylactic treatment of infective endocarditis opens too wide a subject for discussion. I wish to call attention to two points only, since they both bear on that form of the disease which we most commonly meet with, viz., the post-rheumatic.

A. The vast importance of prolonged rest in either averting or benignly modifying endocarditis in acute rheumatic manifestations, and *B*, the importance of the diseased tonsil as an infecting focus in the same.

Briefly, I do not believe that the splendid results obtained by Caton, of Liverpool, in handling acute rheumatic endocarditis are at all as widely known as they should be. I examined three of his cases (in the Liverpool Royal Infirmary) who had all had well

marked signs of acute endocarditis, and who on returning some weeks or months after discharge, to be reviewed, showed no trace of murmur under exertion nor any cardiac enlargement. Caton's treatment consists in (*a*) prolonged rest (at least three months) recumbent; (*b*) the repeated application of small blisters in second and third left interspaces (reflex—through spinal segment for trophic nerves of heart); and (*c*) the prolonged administration of small doses of sodium iodide.

It is surprising to find in the article by Dreschfeld, in "Albutt's System," in the discussion of the avenues of infection in this disease, no mention made of the tonsil. On the other hand, in a most interesting and important paper, Gurich has recently accentuated its importance as an infecting focus. He boldly states that "acute articular rheumatism is a metastatic affection secondary to a primary pyogenic focus in the tonsils and the removal of this focus radically cures the disease without the aid of drugs." He states that in long standing cases of relapsing rheumatism lacunar plugs are always present, and this chronic follicular tonsillitis is the origin of what are usually mistaken for repeated attacks of simple acute pharyngitis. I must refer you to his paper for details as to the operative method for complete removal of the tonsil and obliteration of the infected crypts. Over 30 cases of rheumatism had been treated by attacking the tonsils, with cure in every case, and no relapse to date. If results like these can be maintained and repeated by others, then it seems to me, that tonsilotomy with complete destruction of the crypts may in this way act as a valuable protective measure against the acute infections of the endocardium.

The treatment of this formidable disease, when once established, has, of course, embraced all the remedies in use against acute rheumatism as well as an endless list of antiseptic remedies which have been tried in general septico-pyæmia. The success obtained may be guessed from H. B. Prebles' quotation of 4 recoveries in 132 cases of pneumococcus endocarditis.

To illustrate the methods that have given success in isolated cases of late years:

Broadbent has had a recovery after the free administration of mercuric chloride; also one arrest and one marked temporary improvement after hypodermic injections of pure cultures of yeast. He does not, however, place reliance on these remedies.

Douglas Powell gives his faith to arsenic and has seen recovery after it. He recommends a trial of nuclein to stimulate phagocytosis.

Mitchell Clarke has put on record a successful case treated by antistreptococcus serum in 10 to 20 c.c. doses.

Sansom has had some success with the sulphocarbolates; but in this case of mine they proved useless in lessening the septic symptoms. In one of Sansom's cases, death occurring at a later period, "distinct cicatricial tissue was found at the site of the old ulcerations."

Gibson (Edinburgh) thinks that the therapeutic outlook is decidedly brightening. He

thinks that the serum treatment offers much the best prospect and refers to cases successfully treated by this method by Sainsbury and others. In one case seen by Gibson in consultation, "most excellent results followed the use of the serum." He recommends that the first dose of antistreptococcus serum should not exceed 5 c.c., and that it should be rapidly increased to 20 c.c.; one injection daily, with rigid antiseptic precautions. The ordinary cardiac tonics may be also required.

Dreschfeld has tried large doses of quinine with arsenic as recommended by Fraeutzel for years, but only in three cases was the fatal result averted. One of these supervened on an injury, and in one case "all the signs of infective endocarditis were implanted on a diseased aortic valve." The third one occurred after an attack of gonorrhœa.

Musser (Philadelphia), in a personal letter, states that in the rheumatic forms his chief reliance is placed on the salicylates, "with much doubt as to their value." In other forms Marmoreks' serum, rest, iron and all the usual methods of elimination of toxins are employed.

C. F. Withington records a recovery from a severe and complicated case of malignant endocarditis in which the gonococcus was isolated from the blood. The treatment was apparently by serum.

Nathan Raw seems to have made a distinct advance. He reports two successful cases treated by the rectal injection of antistreptococcus serum. He thinks the remedy of great value in cases of purely streptococcal infection, but finds the usual method of subcutaneous injection objectionable. He has used it per rectum in 25 cases. His technique is as follows: The bowels are freely cleared by aperients and the rectum is gently douched with a little warm saline solution. The formula for injection is antistreptococcus serum 20 c.c.; normal saline solution, 100 deg. F., 40 c.c.; to be gently injected into the rectum morning and evening or as required. No pain or discomfort follows. The serum is rapidly absorbed, and seems to exert the same bactericidal influence as when given under the skin. Skin rashes are rarely seen and the thirst and dry tongue are relieved.

In short, Raw is satisfied that equally good results are obtained by absorption of the serum per rectum as by subcutaneous injection, and with, so far, no skin or joint complications. In addition to the two favourable cases, a third and fatal one is recorded. In the latter case also the remedy was given per rectum.

It is interesting to note that, at the London Temperance Hospital, Soltau Fenwick and J. Porter Parkinson have been using sera per rectum for a number of years. They have recently read a paper on the use in this manner of antistreptococcic serum in gonorrhœal infections and purpura hæmorrhagica. It should be noted, however, that these observers used a polyvalent serum; and when one recollects the varied character of the bacterial flora that has been demonstrated in connection with this disease the importance of this point will be evident. The dose

administered was 10 c.c., and this was given daily for a fortnight, more or less. The results were "astonishing," great improvement occurring sometimes when only two injections had been given.

S. Solis-Cohen (Philadelphia) has recently called attention to the potent remedies we have in this and other septico-pyæmic diseases in the newer organic compounds of silver. He thinks that delay and timidity in their use have prevented many from getting results.

He writes me as follows:

(*A*). I have treated in all six cases of malignant endocarditis with colloidal silver. Of these three died, two recovered, and one improved very much, but the ultimate result is not known. The case was seen in consultation at a hospital and the patient was removed by friends prematurely.

(*B*). The results as compared with other methods are to my mind infinitely better. I have no exact statistics at hand, but I am quite sure that neither my own results nor those of any of my friends with other methods equal two recoveries in six cases. The number, of course, is small and I draw no other conclusion than the facts warrant.

(*C*). The preparation used is Schering's collargolum (new). I prefer the powder to the tablets for the making of solution. It should be a well preserved preparation and give a clear brown liquid, not a grayish. I inject into the vein about 30 minims of a 2 per cent. solution in distilled water. I was under the impression that we had used in some cases a 5 per cent. solution, and this would be desirable if a clear solution could be made. A glass syringe with platino-iridium needle is to be preferred. After the vein has been transfixed with the needle and a drop of blood seen to issue from it, the syringe is attached to the needle, pressure relaxed and the fluid allowed to enter the vein. I have never seen any toxic effect. The dose is repeated once or twice daily, according to the gravity of the case, and as improvement takes place the injections are reduced in frequency to every second or third day, or even once a week. When intravenous injection is impracticable, rectal injection may be employed, or both methods may be used coincidently. In malignant endocarditis I have used only the intravenous method. Richard Cabot (Massachusetts General Hospital), W. F. Hamilton (Royal Victoria Hospital, Montreal), and T. B. Futcher (Johns Hopkins Hospital, Baltimore), all write in somewhat gloomy terms of the treatment ,which seems to be almost entirely expectant and palliative at these institutions, rest, salicylates, iodides, iron, saline solutions and copious water flushing being the main weapons employed.

Cabot says "our success is very slight. The severe cases die. The mild ones recover, but not owing to our treatment."

I am afraid, gentlemen, that I have not made out a very brilliant case for my forlorn hope—yet, if we avoid delay and timidity in dosage, and boldly tackle these cases by the later methods, we shall save a proportion of the cases we now lose.

To sum up then I would suggest:

(1) That the possible incidence of the more venomous form of endocarditis in a large class of infective and septicopyæmic diseases should be kept more constantly in mind, and that obscure cases of remittent or intermittent fever without obvious lesions should direct our attention to the heart.

(2) That, whenever at all possible, laboratory facilities should be utilized in an attempt to establish the particular or the chief infecting organism.

(3) That, in the prophylactic treatment (especially of the post-rheumatic forms), the vast importance of prolonged rest is still not fully recognized, whilst the importance of removing a tonsillar infective focus in good time must be insisted on, the methods of Caton and Gurich being well worthy of attention.

(4) That, in the presence of established infective endocarditis, in addition to such obvious general measures as rest, skilled feeding, blood tonics and normal saline solution our reliance to-day must be placed on two expedients: (*a*) The use of either antistreptococcus or a reliable polyvalent serum in graduated but bold and repeated doses, and (*b*) the injection of one of the organic silver compounds of which collargolum (Schering) may be taken as a type.

(5) That it seems probable that the injection of both serum and silver will be equally effective per rectum as when given by the subcutaneous or intravenous route, and this method may be safely and conveniently adopted in general practice.

(6) That on these lines the therapeutic outlook is likely to be a good deal brighter than in the past.

REFERENCES. — Broadbent, *Heart Disease* (3rd edition), 1900, page 34; Douglas Powell, *Lumleian Lectures,* 1899, page 105; Mitchell Clarke, *Lancet,* vol. 2, 1900, page 168; Sansom, quoted by Osler, 5th edition page 705; Gibson, *Diseases of the Heart,* page 424; Dreschfeld, *Allbutts' System,* vol. 5, page 884; C. T. Withington, *Boston Medical and Surgical Journal,* July 28, 1905; N. Raw, *Lancet,* April 21, 1906, page 1103; Fenwick and Parkinson, *Lancet,* May 5, 1906, page 1244; Solis-Cohen, *St. Louis Medical Review,* February 24, 1906; Caton, *Lancet,* August 17, 1895; Gurich, *Wien. Klin. Rundschau,* October 1, page 691, and October 8, page 707 (quoted *Medical Review,* January, 1906).

NOTE.—The epoch-making researches of Wright (London) on "Opsonins" and the Treatment of Various Infections by the Injection of Bacterial Vaccines opens up for the future a new vista. It seems probable that, in the hands of those specially trained in the technique and theory of Wright's methods, a patent means of influencing such germ diseases as malignant endocarditis will soon be available.

Sir A. E. Wright—Herter lectures—Johns Hopkins Medical School, October 1906.

PRACTICAL POINTS IN INFANT FEEDING

By W. H. EAGAR, M. D.

(Read before Nova Scotia Medical Society, July, 1906).

IN reading a paper of this nature I suppose that some apology or explanation is due. It is a subject that all are more or less familiar with, and also a subject which can be handled in a very simple manner, and yet I feel justified in asserting that few, very few, of us really handle this matter in a practical, let alone scientific, manner. There are many reasons for this, and chief among them is a lack of simplicity in our methods, our busy practitioners have not the time for elaborate formulas and methods, and in the majority of cases could not get their instructions carried out.

I propose, and have endeavoured to follow a system of feeding, which is simple, easily remembered, and at the same time gives us a clear knowledge of what we are doing. I am not advocating this method as being more scientific than that given by Holt, but I do claim that it is more practical for general use, that the percentages are approximately correct and that you can get mothers to use this method where they will not use Holt's, or if using his system will do it incorrectly.

BREAST FEEDING.—We all know that the ideal food for infants is mothers' milk; on this they thrive and are healthy. It is therefore our duty to see that mothers nurse their children wherever possible, and impress upon them the advantages to be derived from so doing. But unfortunately there are some cases where it is necessary to wean a baby. The first and all important reason is a *persistent loss of weight*, but even in this you may have recourse to mixed feeding Other reasons are the development in the mother of some serious acute disease as typhoid pneumonia, tuberculosis, nephritis, disease of the mammary gland or pregnancy. In short illnesses it is better to keep the glands active by means of the breast pump than to relinquish all hope of returning to breast feeding. *Don't* wean in summer.

Ordinarily weaning should take place during the 9th or 10th month.

MIXED FEEDING.—Where the infant's weight is stationary or there is a loss in weight, and this is most apt to occur during the earliest weeks, when the mother's milk is scanty or poor, it is well to give occasional and regular feeds from the bottle This will assist the mother, whose milk will improve as she gets stronger, and in a short time may resume her nursings. As a general rule you may take it that some mother's milk is better than no mother's milk.

How to Wean.—When weaning has been decided upon, es pecially if required suddenly, we must remember that grave digestive disorders may arise. To overcome this begin by using a mixture very much weaker than that usually given at the child's age. We may safely go back four months or begin at the weakest food, and rapidly increase. Where time is not an object begin by supplementing one nursing with artificial food, then two and so on, using the weak foods as above.

Having decided that some food other than mother's milk is to be given, we are confronted by the question, what shall we give? Now every mother knows of, or has used,some of the patent baby foods or prepared milks on the market; if she has not, some learned matronly friend will advise her, and you will be asked numerous questions regarding this or that food. There is only one article which approaches mother's milk in quality and composition (and I know you will agree with me) and that is *raw cow's milk,* and of this and its modifications only am I going to deal with.

A wet nurse is of course an ideal substitute for the mother, but it is so impossible to procure a desirable person that we seldom have to consider her.

Cow's Milk.—In choosing cow's milk as an infant food we should, where possible, procure the mixed milk from a herd, as this has a more even composition the whole year round. From numerous analyses by different men we find that it contains the following ingredients in percentages:

	Fat.	Proteid.	Sugar.
Mother's milk contains—	4.00	1.50	7.50
	4.00	3.50	4.50

We see at once that the fat runs about the same as mother's mik, the proteid 2 per cent. higher, while the sugar is 2.50 per cent. lower. We would require considerable modification to bring them about the same.

Casein.—Now there is one great difficulty with cow's milk as a food, and that is its proteid element or casein. This is the substance which causes practically all of our trouble. The casein forms a very tough curd in the infant's stomach, and brings on indigestion, colic, etc. To overcome this we give it very dilute or add substances which make it more easily digested.

There is another difficulty with adulteration of cow's milk and that is to get it pure. It may be adulterated or unclean, chemicals may be added to preserve it and prevent souring, or it may be a medium for the spread of infectious diseases. We will, I trust soon have government inspection of dairies, and this will be a great help. But many of us, especially those practising in the country, will have to depend upon one cow for their supply and it should be our duty to see that the milk is taken and kept in as pure a manner as possible.

Sterilized Milk.—I have mentioned "raw milk." By this I mean milk which has not been subjected to heat, except to warm before using. We apply heat to milk at times, either pasteurizing or sterilizing. I do not intend to say anything about

pasteurizing as it is very similar to the other method, only requiring more care or special apparatus. Many objections have been raised to sterilized milk, chiefly that it is apt to produce scurvy. This is the case, no doubt, when continued over a very long period, but it is not necessary to continue this method for long. It is reasonable to say that the less we subject milk to unnatural treatment the better, that by so doing constitutional troubles may arise and affect the child in after life. But during the summer months, especially the latter part, we are confronted by a much graver danger in some of the gastric and intestinal disorders which arise at that time. Therefore, I think we cannot say too strongly *'sterilize the milk in summer.'*

This can be done quite simply by standing the milk vessel in water and bring the water to boiling, allowing it to remain there for one half hour. Then remove the milk vessel and rapidly cool on ice, or some cold place.

In the very hot weather when intestinal disorders are more or less epidemic the milk may be boiled.

The next point is the preparation of the milk regarding composition. We must dilute the proteid in order to make it digestible, but at the same time we dilute the sugar, already low, and also the fat. The sugar must be brought up somewhat. The fat we can raise at our discretion.

This formula is based on the Herd Milk Analysis. The other cows which we commonly meet singly are:

	Fat.	Proteid.	Sugar
Jerseys	5.61	3.91	5.15
Holsteins	3.46	3.39	4.84

The Jersey is richer in fat and sugar and poorer in proteid.

The Holstein is poorer in fat and proteid and slightly richer in sugar.

The difference is, however, not great, and you can easily alter your formulas if necessary.

In the following formula plain boiled water may be used as the diluent. Where cream is added it must replace an equal quantity of the diluent.

DILUTION					MILK SUGAR
Milk	Water	Fat	Proteid	Sugar	to be added to 3 ozs. of mixture to make sugar 6 approximately
Parts	Parts	Per Cnt.	Per Cent.	Per Cent.	
1	3	1.00	.88	1.13	1 Teaspoonful
2	3	1.60	1.40	1.80	1 "
3	3	2.00	1.75	2.20	1 "
4	3	2.28	2 00	2.56	1 "
5	3	2.50	2.19	2.81	¾ "
6	3	2.66	2.33	3.00	¾ "
7	3	2.80	2.45	3.15	¾ "
8	3	2.90	2.54	3.27	½ "
9	3	3 00	2.62	3.38	½ "

Average gravity cream contains	Fat Per Cnt.	Proteid Per Cent.	Sugar Per Cent.
	16.00	3.05	3 90

One (1) Drachm Gravity Cream contains 10m. fat approximately.

One (1) level teaspoonful Milk Sugar weighs 1 dr. approximately.

One (1) level teaspoonful Cane Sugar weighs 1 dr. approximately.

Lime water should be added at least 1 dr. to the oz. mixture.

The parts milk are the index to age of child, water remains

fixed, *i.e.*, in 3 months give 3 parts milk and 3 parts water, 4 months, 4 milk and 3 water, and so on.

You will see by this formula that the water is a fixed quantity, namely, three parts, whereas the milk gradually increases one part at a time. This enables us to tell just what mixture we are to give at any age. For instance, your child is two months old; therefore you prescribe two parts of milk and three of water; five months old, then five parts of milk and three of water, and at the same time you have a definite working formula.

I have shown the quantities of sugar necessary to bring the percentage to 6 per cent., but at any time you can calculate the percentage knowing that 60 grains is a level teaspoonful.

The fat percentage can always be raised. Roughly speaking a teaspoonful of cream contains ten minims of fat. This would be 2 per cent. for each ounce of mixture. So you see that it is not difficult to alter your food at any time.

Whey.—There is another milk preparation which it is well to remember and know about, and that is whey. In this we have the indigestible casein coagulated and removed. It has the following composition:

Fat.	Proteid.	Sugar.
0.32	0.86	4.79

You see the percentages, with the exception of sugar, are low. Now, by the addition of cream to this mixture the fat can be raised to the required height without giving any large quantity of casein, but a considerable quantity of soluble proteid in the form of lactalbumin. This sort of a mixture is of great benefit to very young infants with feeble digestive powers, and in cases of indigestion or other disease where ordinary milk is prohibited.

Quantity and Time.—I just want to say a word about the hours of feeding and quantity at a feed, and give you below a table. Regarding quantity, in a healthy infant its appetite should be consulted and the child allowed as much as it will take. In other cases one would do better to adhere to a definite quantity.

AGE.	Intervals by Day	Night Feeds	Quantity at each Feed
For 1st 3 wks	2 hrs	2	From 1 to 3 oz.
" 4 to 5 "	2 "	1	" 2½ " 3½ "
" 6 " 12 "	2½ "	1	" 3 " 4½ "
" 3 " 5 mths	3 "	1	" 4 " 5½ "
" 5 " 12 "	3 to 3½ "		" 5½ " 9 "

I now intend to give an outline of the course to be followed in artificial feeding, and the points to be watched particularly.

Weight.—One of the most important things which we have to do is, *weigh the baby*, or have it done. Every village shop has its scales, and you can always procure the weight from week to week. In this way only can you tell how your food is agreeing with the child, and I can assure you it will add much to your peace of mind when harrassed by an over anxious mother.

A healthy child should gain 6 ounces a week; from 4 to 6 ounces is a good gain. Therefore you can feel confident that the food is all right if it gains this much regularly.

BOTTLE.—The bottle should be oval without any corners so that it may be easily cleaned (oval hygienic feeder and Maw's universal feeding bottle), and must not have any glass tubing or apparatus about it.

TEAT.—The teat should fit on the end of the bottle and have a fairly large round hole, not the leech bite.

An important point to remember is that infants have to be trained to digest cows' milk. We must therefore begin on a weak mixture and increase gradually.

I said before the important point in infant feeding is to know just what you are doing and what you intend to do, and this is the foundation of success.

An infant is brought to you with the complaint that it is wasting, or is not gaining in weight. On enquiry you find that it is receiving some indefinite formula of top milk and water, from which you can derive no practical information. You instruct the mother to have the baby weighed at once, and prescribe one of the above formulas, according to its age, telling her to return in 3 days to a week bringing the weight at that time, and also the former weight, and also to bring the baby's bottle prepared for feeding so that you can examine the food, bottle and nipple, and watch the baby nurse. You also examine a soiled napkin for curds, fat, etc.

A baby may not gain in weight simply because the hole in the teat is too small and it does not get enough food. I have seen several cases of this.

If your baby is not gaining, in addition to the weight index, you may find some of the following symptoms:

VOMITING.—This may be due to too much food given, taken too quickly, binder too tight, etc. If a regurgitation one or two hours after nursing, of sour curdled milk or watery fluid, then the fat is too high or there is too much sugar.

CONSTIPATION.—In the early weeks on a weak food this may be looked for. Do not increase the fat rapidly or give laxatives, but gradually increase the strength of the food mixture.

COLIC.—Habitual colic is due to *too high proteids*, and is generally associated with constipation.

CURDS.—Curds in the stools are due to the same cause as colic and are usually found associated with it.

LOOSE GREEN STOOLS.—Somewhat resembling scrambled eggs are due to an excess of fat or too high percentage of sugar.

DRY GRAY OR WHITE STOOLS.—Generally due to an excess of fat; they have a foul odor and may be distinguished from curds by burning readily and being soluble in ether.

Having examined these things, corrected errors and modified your mixture to suit requirements (always remembering that you must not starve the child), you find that it fails to digest the proteid, you may try the addition of barley water instead of plain water as the diluting fluid.

Barley water is best made as follows: To 2 tablespoonfuls of barley (soaked for a few hours or over night in cold water, which is thrown away) add 1

quart of water and boil continuously for 6 hours, keeping the water up to a quart. Strain through coarse muslin.

Condensed Milk.—Failing in this you may have recourse to condensed milk. I always prescribe "Nestle's" because I know its formula and have used it frequently. Use the sweetened milk, which contains 13 per cent. of fat.

A teaspoonful to 6 tablespoonfuls of water, *i.e.*, 1 dram to 3 ounces has the following composition: Fat 1.6 per cent., proteid 2.00, sugar 8.17.

You see the fat is too low, but may be brought up by the addition of cream or the administration of cod liver oil and malt (Kepler) which contains 50 per cent. oil and agrees splendidly with children.

Unfortunately condensed milk will nearly always cause rickets if given too long, but as a rule these cases are before the 6th month. You seldom require to give it for more than a month, and by the 6th month a child can take other food. So the danger is not great if the feeding is under your care.

Peptonized Milk.—If you fail to reach the desired result by these methods you may resort to peptonized milk. The method of preparing you are already familiar with and is given with all packages of tablets or powders.

You must only partially peptonize the milk, and can give as a rule a stronger mixture than with plain milk. There is no danger of weakening the digestion of the child by this method.

The number of children who will not do well on one of these mixtures, if properly and systematically used, is very few, and when you have them as patients you should invariably suspect some trouble and make a rigorous physical examination repeated frequently. But it is possible that sometimes you may have cases that cannot digest or procure sufficient nourishment out of milk, and these cases are the ones that do well on patent foods, because they seem to be able to digest starch and gain on it.

Starch.—This brings us to the question when can you allow starch in the food? You may take it as a rule not to give starch until the child has cut some teeth, and not until the child is 9 months old, unless specially called for. You know that some infants get fat on patent foods, etc., and this is due to the starch, but remember that starch predisposes to rickets.

Barley water contains quite a percentage of starch, *i.e.*, 1.63 per cent.

Drugs.—Fisally I wish to say a word about drugs. They do not play an important part in this subject, but are of great help in some cases.

Lime water or *sodii bicarb.* It is well to use either of these, preferably the former, in all your mixtures. They have a tendency to make the curd less firm and more digestible.

Citrate of Soda. This is a very useful drug where the child does not digest the casein. It has the power of making the curd more flocculent instead of forming a firm mass, *i.e.*, more like mother's milk. I do not know of any ill results following its use, but it has a tendency to cause constipation. It may be given in hte proportion of 1 to 3 grains to each ounce of food.

FOOD ADULTERATION

By WM. BAXTER McVEY, M. D.,

(Read at the Annual Meeting of the New Brunswick Medical Society, Fredericton, July 17, 1906.)

I DESIRE to call the attention of our profession to a serious matter that concerns the public health, namely, the adulteration of food products.

If time would permit I would like to take up the therapeutic and physiological effects produced on the human system by various adulterants, but will instead confine my remarks to the substances used, and show you the clever way in which a system of fraud and deception is carried on.

The articles exhibited before you in the "artificial group" are as you can see, perfect immitations of the genuine substances in colour, weight, etc. These I collected while persuing a course of research work on food products in the State Laboratory at Boston, Mass. I also place before you a series of very carefully prepared microscopic photos, also taken at the laboratory, showing the appearance of the unadulterated substances, and that of adulterated substances, which were bought in open marked by the official inspectors and brought to the laboratory for examination.

The adulteration of food products has reached such a state that it has become necessary to enact rigid laws relative thereto. We in Canada, as guardians of the public health, should be on the alert. Because as state after state across the border takes action relative to this contemptible form of fraud and deception, the market will be restricted, and it is only natural to expect, the operators will, if allowed, take advantage of the rapid growth and development of Canada, and endeavour to seek a market here.

Imagine a concern going to the expense of getting a plant made whereby wheat is dampened and pressed into pellets as substitutes for coffee beans! After drying, they are burnt to darken and also give them a flavor. Yet such is the case.

The list of the artificial substances shown herewith embraces nutmegs, pepper, cinnamon, cloves, ginger, mustard, allspice, mace, cayenne and coffee, which you can see as far as appearances are concerned are perfect. But they are absolutely devoid of taste and virtue, save that of disturbing and overtaxing the digestive apparatus.

We can hardly glance over a periodical, the advertising pages of which are not largely taken up by some wonderfully prepared health or infants' food. How many times have we observed, when a child requires to be placed on a so-called infants' food, how restless or fretful it becomes. This is due to a deficient nutritive value throughout. These health or invalids' food are usually represented to be free from starch and sold as pure glutin. A test of a number of them revealed

the fact that their statements on the label did not agree with their composition, as analysis showed they contained from 10 per cent. to 68 per cent. of pure starch. A good slice of bread and butter is worth in nutritive value a whole package of these so-called health foods. Before leaving the subject of invalids' food, there is a preparation known as diabetic flour marketed in pound tins, that sells for $1.00, which has been highly recommended for persons suffering from diabetes, to which starch is so injurious. This diabetic flour was claimed to be free from starch. The laboratory inspectors bought 13 packages, ten of which were found to be heavily adulterated and seven contained as high as 60 per cent. of starch.

You will next see by the exhibit the different materials used in the adulteration of foods, which embrace an interesting collection. It also shows the use that the refuse material is converted into. You can imagine the task of the digestive apparatus trying to digest olive stones, coconut shells, exhausted cloves, pepper shells, roasted peas, almond shells, etc. The materials used for the deliberate purpose of adulteration are named "adulterants," and include roasted peas, pepper shells, exhausted cloves, almond shells, olive stones, coconut shells, chicory, wheat starch, corn, buckwheat hulls, turmeric, corn starch, gypsum, rice, glucose and acid phosphate of lime.

I will now consider for a moment the artificial chemical preservatives, which are substances added to preserve certain foods and beverages.

Experience in the laboratory shows that there are seven articles in general use for this purpose, which are shown in exhibit, namely: salicylic acid, borax, formaldehyde, bicarbonate of soda, boracic acid, soda acid sulphite.

Salicylic acid is the general favourite, and is largely used in preserving ketsups, chilli sauces, beverages, jams, fruit syrups, clam bouillon, grape juice, and beef preparations.

To give you some idea of the extensive use of these substances in the large cities I will take milk as an example.

Out of 71 samples collected in Massachusetts 13 contained as a preservative boracic acid, 55 formaldehyde, and three baking soda. In speaking of milk I would like to call attention to the great necessity of thoroughly cleansing the udders. Frequently these become cracked and inflamed and secrete pus, which in the process of milking is squeezed out, and thus contaminates the milk. Another source of adulteration of milk in common practice is the addition of artificial colouring. The popular ones in use are arnotto, turmeric, caramel, carrots, caramel and aniline dyes and various combinations of these marketed as "patent colouring." It was found that 88 per cent. of the milk brought into the laboratory by the inspectors contained arnotto; 10 per cent. aniline orange, 2 per cent. caramel.

The commerce in canned goods year by year is largely increasing; likewise its attending evils. It is a well known fact

that certain fruit acids have a marked solvent action on the tin containers, and when certain fruits come in contact, they become dangerous to use on that account. Blueberries, squash and pumpkins exert a powerful solvent action on tin, as do sardines when put up in mustard oil and vinegar. Out of 31 samples of canned fruits and vegetables examined, 30 contained large quantities of lead and tin in solution.

As to the canned meat industry, the recent revolting exposure of the Chicago packing houses is quite sufficient. And I will simply quote you the statement of General Myles in this matter:

"The disclosures about packing house products now being exploited are not new to me. I knew it seven years ago. I believe that 3,000 United States soldiers lost their lives because of adulterated, impure, poisonous meat. There is no way of estimating the number of soldiers whose health was ruined by eating impure food. In my investigation of embalmed beef during the Spanish-American war, I found poisons were used to preserve meat. My first attention came to me in reports from commanding officers to the effect that the rations were not wholesome and were making the soldiers sick. I ordered an investigation and learned from reports brought to me, that canned meats had been sold to the army which had been for months in the warehouse of B. & O. railroad and in the docks at Liverpool. This meat had been relabelled, and sold to the United States for soldiers' rations. I turned the report over to the war department, and a whitewashing investigation was instituted and successfully carried out. The official report was that a 'colossal error' had been made. As a matter of fact, it was a colossal fraud, and the persons who perpetrated it, and were interested in it should have been sent to the penitentiary."

The officials of the Massachusetts State Board of Health have examined different kinds of canned meats on the market. Of one brand of potted ham, prepared by a western firm, the report states: "This was found to consist of a small amount of normal muscle, considerable epidermis in large pieces, numerous blood vessels and nerves and salivary gland, ground to a paste; quality poor, the material being largely scrap."

As to jams and jellies, out of 39 samples examined it was found that 33 were heavily adulterated and contained apple pulp (the refuse after cider has been expressed), glucose, seeds and aniline dyes.

We have all experienced the disappointment, in an emergency, of mustard given for emetic purposes; also as a counter irritant, in the form of a plaster. It is not much wonder, when out of 251 samples examined 67 per cent was the average of adulteration, the highest containing 80 per cent. of adulterants. The substances used to adulterate were wheat, corn, buckwheat hulls and turmeric.

The same is true of ginger, but not quite so bad. Out of 208 samples examined 17 per cent were adulterated with wheat, ground fruit stones, rice and turmeric.

In cream of tartar the adulterants found were gypsum, corn starch and acid phosphate of lime.

Time will not permit me to go further into this interesting subject. But from the above, I hope to impress upon you the magnitude of this deception. We as medical men see many cases of suffering, and it is a sad sight indeed to see a fond parent trying to appease the craving for a cooling jam or jelly to the parched lips of a dying child. And I hope that in this Canada of ours, the food laws will protect him from getting a concoction such as I have described, namely, a nicely labelled pot of jam, made from the refuse of the cider press, sweetened with glucose, to which some refuse seeds are added, flavoured with the ethers and coloured with aniline dyes to immitate the particular fruit product desired, and preserved with salicylic acid.

The Gastro-Enteric Demur.

If our stomachs could talk
They'd tell a bad tale
  On the guard or keeper, I fear ;
They'd rebel and they'd balk,
'Gainst the cabbage and kale,
  And dressing and stale lager beer.

'Tis our very best friend
Which we often abuse,
  And give him the lash and the spur ;
But ah ! then comes the end,
And we see no excuse,
  For the gastro-enteric demur.

If its wailings were heard,
And its prayer listened to,
  Its plea'd be a light bill of fare ;
Of the dressing and bird,
And fruit cake and slaw,
  For God's sake send no more down here.

INJURIES TO THE PERINÆUM AND THEIR REPAIR.

By R. H. BURRELL, M. D.,

Lunenburg, N. S.

(Read at meeting of Medical Society of Nova Scotia, Lunenburg, July, 1906.)

IT is more with a view to the evoking of discussion than the giving of any academic disquisition upon the subject matter of this paper, that I have presumed to inflict these few remarks upon to-day's assemblage. I think it is much more to the interest of the general practitioner that common, every day subjects be discussed in meetings of this nature, than that the rarer and less common conditions be exploited. I trust that I shall be pardoned for going over some old ground, in order to lead up to the vital points which I wish to emphasize. I intend to refer to primary injuries and the primary operation for repair rather than the secondary or gynæcological operation, for it is with the obstetrical aspects of the subject that we as general practitioners have most to do.

ANATOMY.—The perinæum is the point of convergence of the most important parts of the pelvic floor. The supports are: The bulbo-cavernosus muscle, the transversus perinæi muscle, the external and internal sphincter ani muscles, the levator ani muscle, the superficial and deep fasciæ. These muscles are bound together by deep and superficial fascia, which in some places (*e.g.* the triangular ligament) is very dense, ligamentous and resisting. All the perinæal muscles, through the medium of tendon and fascia, are strongly connected with the pubic bones. Even the sphincter ani, which is a muscle of special functions and which is attached posteriorly to the tip of the coccyx, is closely united with the other muscles of the perinæum and therefore indirectly to the pubic bones by the interlacing of its fibres with theirs and by tendinous and fibrous attachments. The muscles, ligaments and fasciæ unite in the perinæum to form a diaphragm which fills the pelvic outlet, and through which diaphragm pass the lower portion of the rectum, vagina and urethra.

FUNCTIONS OF PERINÆUM AND PERINÆAL REGION.—It is now clear that the muscles, fasciæ, and ligaments of the perinæal region constitute a most essential supporting part of the pelvic floor. They surround, bind together, hold in position, support and maintain in their anatomical relations the terminations of the rectum, vagina and urethra. The perinæal body and perinæal region do not give support to the pelvic floor in the sense of being under it and holding it up, but they are an essential and integral part of that floor, and as such contribute to its make-up and to the support of the abdominal organs above. The recto-vaginal fascia, when intact, is in itself sufficient to afford the required support.

INJURIES.—Injuries to the vaginal outlet and pelvic floor caused by parturition (usually designated lacerations of the perinæum), are among the most frequent of gynæcological lesions. Even though their importance be sometimes overestimated and the gynæcological specialist be thus given an opportunity to dilate upon the incompetency and carelessness of the obstetrician (in the majority of cases a general practitioner), the fact is undeniable that they give rise to many serious disorders and inconveniences.

It is not always possible to avoid the accident, but it is possible to recognize the injury when it occurs and by a timely operation prevent its evil consequences. The duty of the obstetrician includes therefore a careful examination of the vaginal outlet immediately after labour, and another towards the end of the puerperium several weeks later. The latter examination is necessary because some of the worst injuries are not at first apparent.

A laceration of the perinæum which does not cause separation of the fibres of the sphincter ani is termed *incomplete*.

A laceration which extends through the sphincter ani is *complete*.

When an incomplete laceration occurs, the vaginal skin is usually, not always, torn, the fibres of the levator ani more or less torn, the point of attachment of the bulbo-cavernosus to the transversus perinæi severed, together with laceration of the fascial sheaths of these muscles. After the tear the separated muscular and fascial fibres retract towards their points of fixed attachment and as a result, the viscera which were retained within the pelvis have a tendency to protrude between the torn structures, and the conditions of a true hernia are presented. When an incomplete tear occurs, the higher muscular and fascial fibres retract towards the white lines, while the vulvar portion is drawn backwards by the sphincter ani muscle. Thus there is furnished facility for prolapse of the higher pelvic organs, the uterus, bladder and for the lower, the rectum and urethra.

One result of the laceration of the levator ani is the removal of the muscular opposition to the sphincter ani, and as a result active dilatation of the sphincter is impossible, and fæces is forced out only by increased effort of the abdominal muscles Under this straining the fæces comes down to a sphincter but partially open, and as a result the rectum bulges out between the angles of the vagina, and presents a hernial protrusion or rectocele.

Prolapse of the anterior vaginal wall follows later, merely because its higher and lower supports are gone. When the anterior vaginal wall comes down, it drags with it the bladder forming a cystocele.

As the anterior and posterior vaginal walls descend, they drag with them the uterus, but it is the more the continuous straining at stool in these cases, with lack of equilibrium in the intra-abdominal pressure, which conduces to retroversion and descent of the uterus. The mere loss of equilibrium unaccompanied by increase of the pressure from

above is not so potent a factor in producing retroversion and prolapse, for we notice that in complete laceration where the sphincter ani is torn, fæces escapes without pressure, and descent of the uterus is not often seen.

Less important results of the tear in the perinæum are loss of semen after coition, the entrance and escape of air from the vagina with an embarrassing noise, constipation with impaired digestion, muscular weakness and general malaise, retained urine in a cystocele pouch, cystitis and chronic invalidism.

When first made, a perinæal tear presents a triangular shaped, raw surface, usually to one side of the median line, bleeding freely, but with little tendency to separation between the lips of the tear, livid in hue, and with œdematous edges. Beyond slight hæmorrhage, there are no immediate results of incomplete laceration of the perinæum, but in view of the remote results, however, the wound should be at once closed.

Perinæorrhaphy: Primary, Secondary.

As soon as the placenta is delivered and the uterus has firmly contracted, the torn perinæum should be repaired. The vulvar tissues after delivery are deeply coloured, swollen and exceedingly friable. It is wise to wait a few hours before suturing the wound, while the œdema subsides. In the meantime, the operator may deliberately prepare for operation, and get competent assistance, which, by the way, I deem as important as the operation itself, especially when the injury is extensive. If there were ever a condition in which the form or style of operative procedure should be governed altogether by the nature of the injury, we certainly have it here.

Perinæorrhaphy is most satisfactorily done under anæsthesia. Sometimes the tapering off, as it were, of the anæsthesia produced for purposes of delivery, is sufficient for the repair of slight tears. Under anæsthesia a thorough exploration of the parts can be effected and the amount of injury accurately ascertained. An antiseptic vaginal douche should be given and the wound, if not a complete laceration, closed by silkworm-gut or catgut sutures. For the simple median tear all that is required is the passage of one or more deep sutures, including the entire depth of the wound down to the vaginal mucosa, and entering and emerging on the cutaneous surface at equal distances from the perinæal raphe on each side; these sutures are tied in the median line. If there be a vaginal laceration extending up the sulcus upon one or both sides and dividing the fibres of the levator ani muscle, vaginal sutures must first be inserted after the manner prescribed in Emmet's operation, and the perinæal wound closed as before.

The closure of a complete laceration is a more difficult procedure. The operation resolves itself into three stages: First, a strong suture of silkworm-gut or silk must be inserted from the skin-perinæum to the depth of the wound, and in the plane of the recto-vaginal septum, in such a manner as to include within its grasp the torn fibres

of the sphincter ani muscle. This suture emerges at a corresponding point upon the opposite side of the perinæum. It need not be made taut until after the other sutures are passed. The next step includes the suturing of the rectal and vaginal mucosæ, which are closed by a sufficient number of fine catgut sutures, beginning above at the apex of the rent on the vaginal surface and extending down so as to include the rectal mucosa. Some prefer to close the two mucosæ separately, first the rectal, the sutures being tied within the rectum, and then the vaginal, with the knots lying within the vagina. The recto-vaginal septum having been repaired, the sphincter suture may be tightened and the anal orifice thus firmly closed. There now remains the third stage of the operation, namely, closure of the perinæal laceration, which is accomplished by a series of silk or silkworm-gut sutures passed in the manner already described. The injury being thus repaired, a thick coating of boracic acid, boro-chloretone or phenyl-iodide (the form or kind of dusting powder being largely a matter of taste) is dusted over the wound, and, in cases where the vaginal tear is extensive, an antiseptic vaginal suppository may be inserted. In the graver tears it will be well to bind the knees together, a towel or other soft cloth being placed between, for a few days. The after treatment consists in attention to cleanliness, the opening of the bowels on the third or fourth day, and the administration of daily vaginal douches. The sutures may be removed on the seventh or eighth day.

The text-books are filled with the most exquisite diagrammatical illustrations of perinæal lacerations, complete and incomplete, and with descriptions of operations for their repair, both primary and secondary. One would think the operation to be as easy as the proverbial "rolling off a log," but my short experience, which will probably be borne out by the longer and larger experience of others here to-day, goes to show that such is not the case. The physician may be almost faultless in his technique and still have results which are as distressing to himself as to his patient. I am free to confess that I have not had the brilliant results spoken of and pictured in the text-books, especially in the repair of serious injuries to the perinæum resulting from parturition. My difficulty has been the breaking away of the stitches. Whether or not it is due to the kind of sutures used is a fair matter for debate, and it is largely with that end in view that I have collated these scattering thoughts. Pryor is very enthusiastic about silver wire as a suturing material, especially in cases where there is much tension. For the lighter sutures he uses catgut. Dudley uses silkworm-gut almost exclusively.

The secondary operation lies almost exclusively within the province of the gynæcologist. Seldom indeed in this section of the country does the general practitioner have the opportunity to perform a secondary perinæorrhaphy. Most patients prefer to put up with the inconvenience, and trust to the good fortune of another parturition to

give themselves and the accoucheur an opportunity to make good what may have been an error of judgment or misfortune on the part of one or both at a previous confinement.

I am well aware that, as a rule, we get results alike satisfactory to ourselves and our patients, but it seems that at times when we use the greatest care, and expect good results, we often meet with grave and distressing disappointment.

MADAME LA DOCTEUR.

Tis she; I know her cheerful, vibrant voice,
Her swift, light step approaching:
My Languid senses, wakening, all rejoice,
Nor does the heart need coaching,
But buoyantly betrays new strength, the while
Awaiting happily the doctor's smile.

I gaze into the kindly questioning eyes.
Her warm, true heart revealing,
When suddenly, the look grows deep and wise,
He thought from me concealing;
For Galen's science now my love allures,
Suggesting, possibly, some wonderous cures.

Still serious as a judge, she feels my pulse,
New medicine prescribing,
While I would scientific rules convulse,
My lessened ills ascribing
Not to the science learned at Galen's throne,
But to her magic influence alone.

—*E L. Jacinto*

WHY DO DISEASE GERMS VARY IN VIRULENCE?

By A. P. REID, M. D., L. R. C. P., Etc.
Provincial Health Officer, Middleton, N. S.

(Read at meeting of Medical Society of Nova Scotia, Lunenburg, 1906.)

THIS is a very simple question, and a tyro in biology would correctly answer, "owing to the soil on which they grow, this growth is more or less luxuriant. Luxuriance in this case means *virulence* and an unsuitable soil *harmlessness*."

But why is this thus in disease, as we generally find it? To answer this would bring us far afield, but we may consider a few prominent points.

There are two varieties of pathogenic germs. The one, including those of malaria, yellow fever, trichina, tænia, etc., and all forms that have their life cycles so divided that one part takes place in one creature and the other in another and very different creature, we will not here consider. The other variety includes such as those of typhoid, cholera, tuberculosis, diphtheria, etc., which develop in an individual and throw off germs that retain vitality for a longer or shorter period and float around until they reach a soil on which they can grow.

To this latter form we will direct attention.

Let us assume that these germs are always present, either in the air we breathe, or water or food we consume, and let us also assume that, given an organism in perfect health, it will not furnish a soil suitable for germ development so that they are harmless even when present. This is called immunity. Suppose the health not to be so perfect, then there may be partial growth (a mild form of disease). As the health is more and more lowered, the soil becoming more and more favourable, the disease germ elements flourish in proportion and we have different types of severity in the disease up to extreme virulence. Of course germs themselves may vary in type.

These platitudes are only referred to for their bearing on the following arguments:

What is health, or this condition that nullifies inimical agencies?

In the language of the engineer, under ordinary conditions we start out in life with a factor of safety of from 5 and 10 to one, or as our grandfathers would say *vis vitae*, to overcome all ordinary vicissitudes, and then by proper exercise (labour) and food this *factor of safety* or *vis vistae* may be retained intact, and contact under ordinary conditions with disease germs is harmless. This is very often demonstrated where a number of people are exposed to the same disease agency, and very likely no two are similarly affected, and some escape quite scatheless.

Now we come to the point we specially wish to consider. Let us assume that the air, water and food are unobjectionable, and exercise instead of being regular and moderate is fitful or deficient. In what way does this tend to disease?

First, we will consider the food. There are two necessary elements, the hydro-carbonaceous and proteid or nitrogenous, that subserve very dierent functions in the economy. The hydro-carbons, by oxygenation, furnish the energy (heat) necessary for the work within the economy and all the outside work which is performed; the result of the metamorphosis being work on the one hand and carbonic acid and water on the other. These are eliminated chiefly by the lungs after being oxidized in the tissues. A superabundance is likely to be deposited as fat, which can be made available at a future time if there be a deficiency of this necessary food. As far as we are aware it does not demand much work from the liver, kidneys and other emunctories. In the case of vegetable forms of this food a superabundance may pass away directly by the intestines and call for no increased function of the organs of digestion and assimilation, or extra strain on the circulation or heart.

If only the proper amount be taken as food—just enough to supply demand—it is removed by the lungs after its oxidation by the work it does in the muscular and other systems, that do not figure very highly in the disease catalogues.

Far different, however, is it with the nitrogenous or proteid elements, the (incorrectly) so-called nutritious part of the food. Their sole function seems to be to repair the waste of the tissues, which results from oxygenation as a result of their work, and to build up new tissue in growth and development. It very inadequately serves the place of carbonaceous food even in part. Hence its presence in the blood should only be in such proportion as is demanded *pro tem,* and if in excess it cannot be readily stored away for future use (as carbon can in the fatty tissue) and it must be eliminated, thus throwing inordinate labour on the assimilative energy, and on the liver and kidney and heart, which in addition to their ordinary work of removing waste tissue are so much more loaded with the labour of transforming a foreign or superfluous body into urea-uric acid, etc., for removal by the kidney and emunctories. These organs by reason of their *vis vitae* do it and continue to do it, but for a limited period. As a result we have an unhealthy blood, a nidus for disease germs and in time a worn out liver, kidney and heart, which go by several names, the most common being the so-called *Bright's disease.*

This food may now become a waste product, a foreign body, a poison in the blood, and in too large a quantity to be readily removed by the emunctories, and the economy tries to dispose of it in some way: it may be in the joints as uric acid and urates in gout or in some other way, as in rheumatism and so-called blood diseases.

The blood when thus poisoned cannot fulfil its proper function as in health, and, circulating through the tissues, they are not perfectly nourished, and hence are in a position to become the prey to disease germs by furnishing a nidus for their growth and development. Hence either superabundant or defective alimentation in proportion to the amount of exercise or work done, by weakening the economy is the real cause of the disease—and the *germ* is only an accidental element. This condition is also the measure of the virulence of the germ.

With regard to nitrogenous food there is another point which if known is not sufficiently considered. I would refer to the vegetable and animal types. Animal food has more to do with the indirect cause of disease than it generally gets credit for. It is so much more appetizing and stimulating that the appetite is not a correct guide as to the amount which is required—and a much larger quantity is likely to be used than is needed. Again it is so much more readily digested that it is absorbed, not passing away unacted on by the intestines, and on the emunctories devolves the heavy labour of removing this superabundance as well as their ordinary duty in removing normal waste.

They may be unable promptly to do this, hence there is a poisoned blood in circulation, as previously referred to, and in any case they are using up their factor of safety or *vis vitae*, thus leading to disease, and, owing to the organ most weakened, early and mayhap sudden death.

The vegetable proteids are abundantly able to supply every legitimate demand of the economy. They are not so appetizing, and hence not so likely to be used in excess. They are not so readily digested, hence the system is not called on to assimilate more than is needed, and a superabundance is more likely to pass away as waste by the intestines, and hence the causes before enumerated in speaking of a meat diet, are likely to be here inoperative.

The same law holds good in reference to the vegetable and animal hydrocarbons, though in this case a superabundance in the blood does not work so much evil.

If the above arguments hold good then the answer to the question, "Why disease germs vary in virulence," would be that a want of the correct proportion between the exercise (work) and the food taken prepares the soil for the invading germ or cause of disease, and the quantity of the defect or the length of time which it has existed is the measure of the virulence of the intruder.

Also that this condition is more likely to be in the direction of deficient exercise and superabundant alimentation in the proteid or nitrogenous elements of food, and further that is the more likely to be the case when animal food is largely used instead of the vegetable forms.

It would be quite in place to refer to the powerful influence that a life and exercise in the open air has in enabling the

economy not only to resist all disease causing agencies—not excepting gross irregularities in the way of diet and work: also to dwell on the ability of a purely vegetable diet to not only supply every legitimate but many illegitimate demands on the *vis vitae*. But the subject is far too extended to be properly dealt with in any short paper.

The teaching of physiopathological science is that the correct treatment in a vast number of different diseases is hygienic rather than medicinal, and that the role of the physician should be to advise his patient how to avoid sickness, which could be done by a careful study of the individual case and all the factors involved—medication being a side issue.

To put it in other words. The patient in consulting his physician, should detail his ailment and then ask the doctor to what he attributed the attack of sickness and how it is to be avoided. By removing the cause the present indisposition would get well, for this can only be accomplished by the reserve force or *vis vitae* of the patient—medicine may assist.

Negativing this common sense consultation, the patient in consulting his physician details his pains and aches and asks to be relieved. Any advice the doctor may give is likely to be ignored, but he readily takes the prescription and also the medicine. He tries to cheat nature by dulling her warning notices, and keeps on his unhygienic course to be again brought up "by a round turn"—gets the doctor to put him on his feet again, and so on, to finally be confronted with Bright's disease, gout, rheumatism, arterio-sclerosis, tuberculosis, etc., or to drop off suddenly from stoppage of a heart that has used up all its original factor of safety and perchance must stop from overload.

It does not appear to be clearly enough understood that our blood not only carries the revivifying sustenance of all our tissues, but it is the common sewer into which all waste and all deleterious matter are thrown in their way to removal from the economy.

This is as nature designed it and it will perform this double duty and yet may, barring accidents, keep all the machinery of life running for over 100 years. But its capacity as a sewer is limited and if its factor of safety be too far encroached on it will be unable to perform its functions and disease of any kind may result. Here the ubiquitous germ can "get in his work" wallowing amid polluted tissue.

PERSONALS.

DR. R. E. MATHERS has lately been on a visit to some of the New York hospitals.

Dr. A. C. Hawkins is recovering from his long siege of ill ness.

Dr. K. A. MacKenzie has been appointed on the Dispensary staff to fill the vacancy caused by the resignation of Dr Lessel.

Dr. E. B. Roach, formerly of Tatamagouche, has rented the house, 63 Morris Street, this city, to take up practice. Dr. Roach is succeeded at Tatamagouche by Dr. Daniel Murray, formerly of Lyon's Brook.

Dr. F. E. Lawlor, of the Nova Scotia Hospital, was married on October 12th, to Miss Muriel Milliken, of this city. The NEWS extends its congratulations.

Dr. W. D. Forrest, of this city, has recovered from an attack of typhoid fever. Fortunately the disease ran a mild course.

Dr. W. T. Grenfell, of Labrador, was included in the list of the King's birthday honors, having been made a companion of the Order of St. Michael and St. George.

Dr. W. G. Putnam, of Yarmouth, has gone to visit some of the New York hospitals for a few weeks.

Dr. John Stewart is at present in Montreal and will not likely return to Halifax before the end of December. We are pleased to learn that his health has much improved.

Intussusception Relieved by Gaseous Distension.

TO THE EDITOR OF THE NEWS:

The type-written copy omitted to state the amounts prescribed by Bartholow, and which I approximately used in my case, viz., between 40 and 50 grains each of acid tartaric and soda bicarb. (October NEWS, page 384.)

Yours,
J. A. SPONAGLE.

Katie Barry, the accomplished actress, desires to acknowledge the receipt of the following letter:

Miss Barry, Lyric Theatre,—

Dear Madam: Knowing you to be interested in anything novel in theatrical entertainments, I should like to make an appointment to show you my collection of trained germs. They have the well known flea circus "skinned to death." The star of the company is a typhoid fever bacillus named Mike, who can stand on all seven of his hands and whistle "Home Sweet Home" through his teeth. I have also two young measles microbes who do a sister act and a family of diphtheria bacilli, the youngest of which can tuck his limbs under his neck and sit on both ears at once. The performance can be given on a stage two inches square. Kindly let me know when you will see me.—*New York Sun.*

SOCIETY MEETINGS.

HALIFAX AND N. S. BRANCH BRITISH MEDICAL ASSOCIATION

NOVEMBER 7TH, 1906.

CLINICAL meeting held at the Victoria General Hospital, the President, Dr. J. Ross, in the chair.

The minutes of the annual meeting were read and approved.

The Treasurer, Dr. G. M. Campbell, read his report for the year 1905-06, showing the branch to be in a most satisfactory condition financially.

Drs. L. M. Murray and Goodwin were appointed auditors.

The clinical programme for the evening was then proceeded with.

Dr. Ross presented three cases:

(1) A young woman with small syphilitic serpiginous ulcers in the vicinity of the knee.

(2) A woman aged 64, suffering from pityriasis rubra. Patient has been in the hospital five years before and made a good recovery. Disease recurred two years ago, patient being now in the hospital six weeks with steady improvement.

(3) A young girl aged 5½ years with complete alopecia of the scalp. There was in a month's treatment signs of a few lanugo hairs appearing on several parts of the scalp. The treatment carried out was a tonic, a stimulating lotion and static electricity.

Dr. D. A. Campbell then presented two cases:

(1) A case of Raynaud's disease in a man aged 38 years. The disease was of five years' standing, marked lesions being present at the ends of the fingers and to a less extent in the toes. Points of interest peculiar to the case were the clubbing of the finger tips instead of pointedness, and the red color instead of the usual cyanosis.

(2) A hysterical girl who exhibited the symptom of astasia abasia.

Dr. Farrell mentioned a case of Raynaud's disease which he had under his care some years ago. A young lady whose leg was amputated for tubercular disease of the knee, developed Raynaud's disease in the other foot. The amputation possibly accounted for the subsequent symptoms.

Dr. Campbell referred to the application of a tourniquet high up the limb as a new line of treatment. He had seen Dr. Farrell's case and concurred in the diagnosis.

Dr. Woodbury, of the house staff, presented two cases for Dr. Chisholm, who was out of the city:

(1) A middle-aged man whose spine had been fractured seven years ago, partial paralysis of both legs resulting. Recently one of the legs had sustained a fracture, and as there was no evidence of repair, an

amputation had been done, which resulted in perfect healing. This case also showed a trophic ulcer on the glans penis which had appeared shortly after the spinal injury and remained unchanged ever since.

(2) A middle-aged man in whom amputation had been done on account of a septic wound. Healing promptly followed, but later on an abscess developed over the scapula which was possibly pyæmic.

Dr. Hogan, in discussing the first case, referred to a case of fracture in a paralyzed leg, which had united perfectly under ordinary treatment.

Dr. D. A. Campbell then showed a series of remarkable pathological specimens, all of which had been taken from one case.

(*a*) Hour glass stomach. (There had been no evidence of any digestive disturbance.)

(*b*) Greatly hypertrophied heart, also dilated. Aorta dilated and atheromatous, showing marked calcareous areas. Evidence of aortic stenosis. Mitral orifice dilated, but valves in good condition. There had been an aortic diastolic murmur present and general dropsy. No fluid, however, could be drained from the limbs by canmulæ. A left-sided hydrothorax had appeared early in the case, the draining of which gave great relief. This afterwards disappeared altogether, and was followed by a similar condition on the right side. The autopsy revealed a total obliteration of the left pleural cavity by adhesions. Abdominal paracentesis had been frequently done. Cardiac tonics had been of no service. Digitalis only appeared to aggravate the symptoms. Death had been sudden.

(*c*) Liver showing marked perihepatitis.

(*d*) Spleen much toughened in texture and enlarged with perisplenitis.

(*e*) Kidneys enlarged but otherwise apparently normal.

There was no syphilitic history obtainable but Dr. Campbell considered the condition of the organs to be suggestive of the disease.

Dr. Campbell then exhibited a portion of he intestines from a typhoid case—two feet of the small and fifteen inches of the large. There were only one or two of Peyer's patches undergoing ulceration. There were numerous follicular ulcers. The greater part of the ulceration appeared in the large intestine in the ascending colon. The symptoms had been extremely severe with hæmorrhages.

Dr. M. A. B. Smith, referring to the first case, remarked on the great rarity of hour-glass stomach. The heart showed lesions which should have caused an aortic systolic murmur, but this could not be detected. He recommended exercise for a patient before auscultating the heart, so that any murmurs present might be made distinct.

The meeting then adjourned, after which they were hospitably entertained to an oyster supper by the superintendent, Mr. W. W. Kenney.

St. John Medical Society.

The President, Dr. Melvin, in the chair.

October 3rd.—The first meeting of the year was held under favourable circumstances, there being twenty-one members present.

An interesting programme, giving the dates of meetings and the readers of papers, had already been carefully prepared and distributed among the members.

The President read a paper entitled "Crossed Heredity," the most prominent point of which was that in cases of conspicuous ability there is a crossed mentality, *i.e.*, the son inherits the mentality of the mother and the daughter that of the father. Interesting examples were given in support of this theory, among them Bacon, Napoleon, and Pitt.

After a general discussion, on the President's invitation, the members adjourned to White's restaurant, where they had a delightful supper and spent a very pleasant evening.

October 10th.—Pathological Specimen. Dr. T. D. Walker exhibited an ovarian carcinoma, and contributed some clinical and pathological notes in connection with the case.

Dr. Lunney read a paper on "Whooping Cough," dealing fully with the symptoms, complications and treatment. This paper will appear in the News.

In the discussion which followed, Dr. T. Walker and Dr. Inches spoke of the value of antiseptic inhalations.

Dr. F. H. Wetmore commended the use of bromide of potash, and cod liver oil with malt.

Dr. Bentley referred to chloroform inhalations.

October 17th.—The Secretary, Dr. Pratt, read a paper entitled "Disputed Points of Small-Pox." This paper will appear in the News.

October 24th.—Dr. Melvin exhibited a patient with both lupus vulgaris and lupus erythematosus.

Dr. Crawford read a paper on "Perichondritis of the Larynx" and showed a specimen. This paper will appear in the News.

An address on "Surgery of the Stomach" was then delivered by Dr. Hugh Cabot.

This was a most interesting and valuable contribution. The relation of the physician and of the surgeon to diseases of the stomach was considered, and a strong plea was made for a clear understanding as to the position of each in this class of cases, and the importance of co-operative effort was pointed out. Certain gastric conditions are medical, others are medical up to a certain point, then surgical, while still others are purely surgical. Appropriate treatment depends on the recognition of this classification.

Practically nothing is known of the ætiology of ulcer of the stomach. The presence of bad teeth may be a factor as suggested by Mayo Robson. Acute ulcer is more common in the female, chronic ulcer in the male.

The reverse is the case in appendicitis.

Ulcers occur in the middle twenty years of life (20-40), being uncommon before or after that time. There is a considerable percentage of cases of cancer engrafted on chronic ulcer.

The so-called characteristic symptoms are frequently absent. In 1,000 cases of gastric ulcer, 20 to 30 per cent. are without special symptoms, until perforation or pyloric obstruction occurs.

In any case of dyspepsia not yielding to medical treatment, be suspicious of ulcer.

The stomach tube is of much value in diagnosis as is the guaiac test for occult blood in the stools.

TREATMENT.—A single acute gastric hæmorrhage is clearly a case for medical treatment. Dyspepsias also are medical so long as they improve under treatment.

Acute perforations are urgently surgical. Operation within 3 or 4 hours will give a majority of recoveries, but in those done after 12 hours the majority will die.

In ulcer with recurrent hæmorrhage, less than 50 per cent. are cured under medical treatment; surgery in the other half will give the best results.

Pyloric obstruction and hourglass contraction and dilatation are surgical.

Ulcer of the posterior wall with marked adhesions cannot be relieved by surgery; nor can multiple bleeding from the stomach walls.

Gastric neuroses are medical.

When there is ulcer with recurrent bleeding, when there is pyloric obstruction and in dyspepsias where medical treatment fails, surgical relief should be the procedure.

Numerous illustrative cases were mentioned.

On motion, a vote of thanks of the society was tendered to Dr. Cabot.

CURRENT MEDICAL LITERATURE

(In order to afford our readers a rea means of learning what new books an new editions are being issued, we propose publishing such lists as follow from time to time. We would be glad if medical publishers would co-operate with us, so that these lists may be made as complete as possible.)

A Non-Surgical Treatise on Diseases of the Prostate Gland and Adnexa. By GEORGE WHITFIELD OVERALL, A. B., M. D., Chicago. Third edition, 1906. Published by the Rowe Publishing Co.

It was our privilege to review the first edition of this treatise in the NEWS of March, 1904, and now the third edition has been carefully perused. Our review of the first edition concluded with these words: "We trust that the experience of others following in a similar line will further prove the good results advocated by the author." Since that time we have followed to a considerable extent the author's method of treatment, particularly in chronic gonorrhœa and its sequelæ, and therefore are enabled to give an opinion of the results obtained. In a short paper read before the Medical Society of Nova Scotia in July, mention was made of the favourable results in treating cases of chronic urethritis and prostatitis along the lines laid down by Dr. Overall. Four months have transpired since that meeting, and increased experience has more fully convinced us of the therapeutic effects of electrolysis and cataphoresis in such cases. Our experience with electrolysis in stricture is somewhat limited, so no comment on that subject will be given at this time.

The author is obviously of an ingenious turn of mind. Not only does he continue to improve his methods of treatment ,but is constantly devising new instruments for diagnosing and treating localized lesions from the meatus to the bladder. The high frequency and high potential currents have been applied in the treatment of prostatic diseases evidently with success, judging from several published case reports in the book. With this method we have so far not had any experience.

Excellent results in cases of chronic prostatitis, where the gland had been much enlarged, have been achieved in our practice. This plan of treatment is so far superior in chronic cases to dilatation by Kollmann's instruments, applying strong irritants to localized patches, etc., that we have entirely discarded the latter method. Any physician taking special interest in the line of work referred to in Dr. Overall's book will be amply rewarded by following the details written therein.

❦

INTERNATIONAL CLINICS: A Quarterly of Illustrated Clinical Lectures and Especially Prepared Articles on the Various Branches of Medicine. Edited by A. O. J. KELLY, A. M., M. D. Volume III, sixteenth series, 1906. Price $2.00. Published by the J. B. Lippincott Company, Philadelphia and London. Canadian Representative, Charles Roberts, Montreal

Four articles under the heading of Treatment will be found of particular value in this volume, dealing as they do with every day cases.

"The Treatment of Acute Pleurisy," by A. A. Stevens, of

the University of Pennsylvania, gives most valuable hints in this affection. For instance, the writer recommends for relieving the pain the application of a few wet cups or leeches, a method well recognized but too often forgotten. "The Treatment of Certain Forms of Bronchitis," by J. M. Patton, of the University of Chicago; "The Treatment of Dilatation of the Heart," by W. H. Katzenback, of the New York Polyclinic; "Professor Fournier's Recent Modification of his Treatment of Syphilis," by H. Saingery, of Paris.

These articles will amply repay the reader for the small outlay in price of the volume.

Under Medicine there are many valuable articles, such as "Autointoxications and their Treatment," by E. C. Hill, of the University of Denver; "The Irregular Heart: Its Causes and Treatment," by Bertram Abrahms, of Westminster Hospital, London; "The Diagnosis of Some Chronic Joint Affections," by H. S. Clogg, of Charing Cross Hospital, and "Life in the Antarctic from a Medical Point of View," by J. H. Harvey Pirie.

Under Surgery are also many practical papers, such as "The Hyperemia Treatment of Swollen Joints," by E. H. Bradford, of the Harvard Medical School; "The Clinical Significance of Peritoneal Adhesions," by C. G. Cumston, of Boston; and "Some Surgical Results Which May Follow Improper Feeding," by E. M. Corner, of the Hospital for Sick Children, London.

The usual number of excellent plates and figures reflect much praise to the publishers, and the articles written by men of experience should appeal to every physician.

FOR IDLE MOMENTS.

Proof Positive.

EFFIE—"But, papa, how do you know that it was a stork that brought us the new baby?"

PAPA—"Because, my dear, I just saw his bill!"—*Woman's Home Companion.*

Anticipated Pleasure.

Her father had undergone an operation for appendicitis, and five-year-old was making her first call. When nurse came to take her away, she hung back a moment. "Haven't I been very quiet, papa?"

"Yes," whispered the fond parent.

"And haven't I been very good?"

Her father admitted it.

"Then won't you do me a big favor, papa?"

"Certainly. What is it my child?"

"Let me see the baby."

The Rendezvous.

KNICKER—Do you think that family life is dying out?

MILLIONAIRE—Not at all; with appendicitis, automobiles, and football, we meet at the hospital.

From An Eye-Talian.

Doctor (after careful examination): "Some foreign substance is lodged in your eye."

Dennis: "Oi knowed ut! That's what Oi git f'r wurrukin' wid them Dagoes!"

A Little Mixed.

An esteemed writer in a contemporary magazine, waxing very earnest in a plea for the curtailment of venereal diseases, refers to Fournier's Statistics, "embracing women from every walk of life." It would seem as though this gentleman had got his statistics confused with his etiological data. He certainly could not epitomize the etiology of venereal diseases into any more concise or comprehensive a form than the sentence we have quoted.—*Med. Standard.*

Pharmacal Heredity.

Dr. Oliver Wendell Holmes once made an address in his native town to a medical association. The president of the association was the son of a man who had been the druggist of the village when Dr. H.—— had studied medicine there. "It is good to look at this young man," said the genial autocrat, "and trace his father's liniments in his face."—*Men and Women.*

Utterly Crushed.

The following report of a conversation heard near a tenement appeared in a recent number of *Lippincott's Magazine:* "Did that there woman from the mission give ye a call yistidy?" "Deed and she did. Them kind makes me tired. Didn't she set for a good hour talking to me about sannytation an' hygeeny an' how I ought to give civilized milk to my baby, an' all that sort o' rubbish, until I got tired an' I sez to her sez I, 'Did she have any babies of her own?' An' when she looked foolish an' said as how she was 'Miss Brown,' I sez, sez I, 'Well seein' that I've buried ten, I don't see no one has any call to tell me how to rare up babies, 'speshly some one as never rared up none of her own.' I guess that dashed her so she won't be apt to come 'round givin' me no more of her gab about civ zed milk 'an sannytation an' sich nonsense.

Young Fissick's got a shingle out
Proclaiming him M. D.;
But from A. M. to late P. M.
His office is M. T.

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THERAPEUTIC NOTES

AN IMPORTANT DISCOVERY.

ONE of the most interesting and valuable discoveries in the realms of medicine was the discovery by Prof. A. M. Clover, B.S., Ph. D., of the University of Michigan, when, after several years of patient study and investigation, he succeeded in isolating a new non-toxic substance possessing most powerful germicidal properties.

This substance belongs to the organic peroxide group and is chemically, disuccinyl peroxide.

Disuccinyl peroxide is a white, fluffy crystalline powder soluble in water 1-60, and when dissolved in water undergoes a change by hydrolysis, succinic peracid and succinic acid being formed. The succinic peracid is an exceedingly powerful oxidizing and germicidal agent almost as powerful as disuccinyl peroxide.

Disuccinyl peroxide, or more familiarly known as *Alphozone,* has many advantages peculiar to itself, and careful tests thoroughly demonstrated its germicidal power and non-toxic effects.

Alphozone was found to be equally as destructive to pathogenic micro-organisms as mercury bichloride, but, as it has no deleterious influence upon the tissues to which it is applied and is devoid of all toxic effects even in fairly large doses internally, the importance of the discovery of alphozone cannot well be estimated.

Alphozone is probably as near the ideal germicide as it is possible to get, and possesses a wider range of usefulness than any other germicide known to science.

Non-toxic, freely soluble, solutions ready for immediate use, odorless, non-corrosive and stainless to the tissues, does not coagulate albumen nor effervesce with pus or blood, not unpleasant to the taste, and, as it is offered to the profession in tablet form as well as in powder, alphozone is not only convenient but economical to use.

Messrs. Frederick Stearns & Co., the manufacturers of this important substance, would no doubt be pleased to furnish information to those who are interested.

Alphozone is assuredly well worth further investigation by the up-to-date physician.

OZÆNA

By E. E. Hitchcock, M. D., N. Y. City.

Some three months ago a young lad, twelve years of age, was brought to my office with the request from his teacher that he be sent home. As he entered the room I was much impressed by the fearful odour from him. It was indescribable and permeated the entire room. Not having seen a case like this before, I made a careful examination for the cause. He was anæmic, had difficulty in breathing, was somewhat emaciated and seemed poorly nourished. On questioning him I found that this condition had existed for some time (two months or more) the odour

steadily becoming worse. He had been treated by physicians unsuccessfully in the meantime. As the rules of the Board of Health for this division limit me to simply a diagnosis, I pronounced the case from the odour, history and limited examination a case of ozæna or fœtid form of atrophic catarrh, with a possible necrosis or caries, and referred him to the Nose and Throat Hospital of this city, his teacher and the principal meanwhile protesting against his attending school, and as I had no authority to send him home, the disease not being recognized as contagious, I advised that he be allowed a seat by himself. At the end of two weeks' time, not seeing what I would consider much of an improvement, I, on my own responsibility, gave him a K. & O. douche and a small bottle of Glyco-Thymoline. In about ten days' time the odour was hardly perceptible and at the end of two months it had entirely disappeared. His general condition was remarkably improved as well as his sense of smell. The case was watched daily by myself, the principal and his teacher, who became interested as the case progressed. Summary—The boy has not lost a single day at school, his sense of smell is completely restored and his health has never been better.

The Necessity for Hæmatics After Miscarriages.

The more one studies the pathological conditions which follow premature expulsion of a fœtus, the more evident it becomes that changes and complications which result from such unnatural termination of a natural process, are little appreciated. There can be little wonder, therefore, that abortions and miscarriages so often give rise to countless female ills, and so frequently lead to lives of more or less chronic invalidism.

Take, for instance, the average case. The whole female organism, as soon as conception takes place, makes preparations to meet the growing demands of the impregnated ovum. The vital processes of both nutrition and elimination are more heavily taxed, and this, of course, means greater activity on the part of the nervous and circulatory systems. Under normal conditions, however, since the female organism is especially designed for the one

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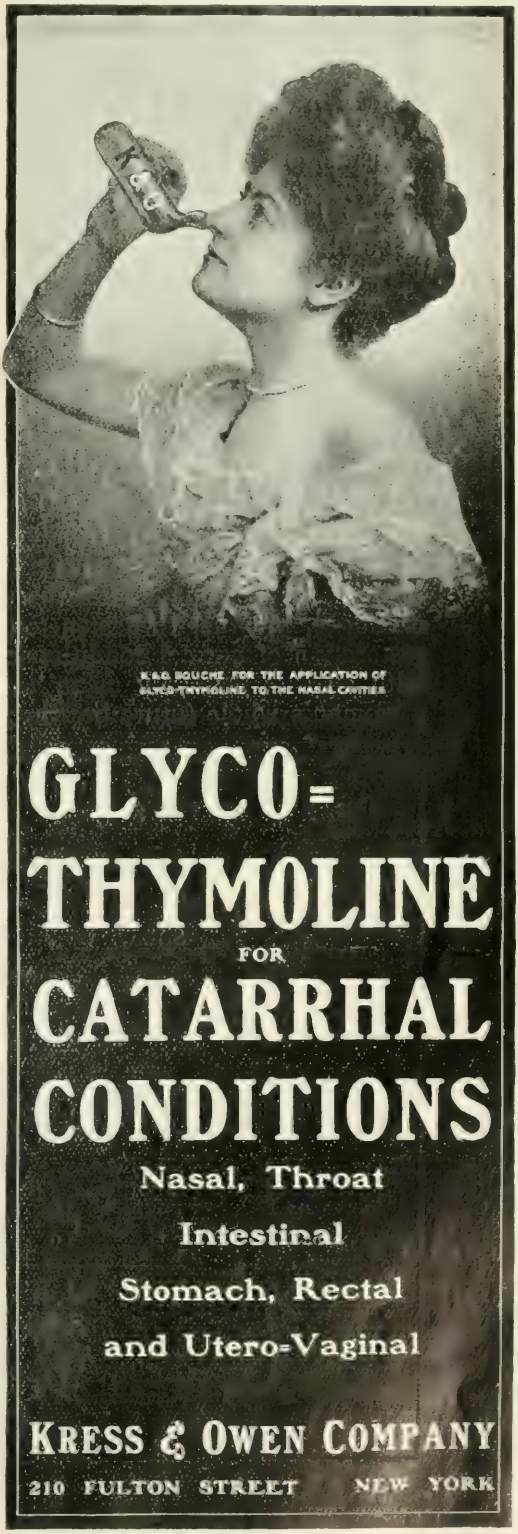
For Announcement and special information, write to

R. Max Goepp, M. D., Dean, Lombard St., above 18th St., PHILADELPHIA, - Pa.

great purpose, maternity, there is only a modification or increase of function throughout the body. Thus in every sense, in spite of its many complex details, normal pregnancy is purely physiological.

But if for any reason pregnancy is abruptly terminated before the time at which it would normally end, the condition becomes distinctly pathological. Delicate structures, especially those of the generative organs, are suddenly arrested while in a stage of active development, and a retrograde process has to be prematurely established. There naturally follows a marked depression of the whole nervous system, because of its unprepared state for meeting an event unexpected and unnatural. More important than all, however, is the fact that certain growing tissues that would separate normally at the end of pregnancy, in early stages are so closely attached to the uterine wall, that premature delivery always means tearing them away, leaving ragged, lacerated surfaces and an inevitable retention of tissue that because it has no further purpose must be either thrown off or absorbed by the organism. The extreme liability to infection at this time is well-known, and is directly due to the predisposition which attends this invariable presence of dead or dying tissues.

From the foregoing, it must be apparent, that the effect of every miscarriage is depressing in character. Every organ cannot fail to feel the pernicious imprint, and there is a logical falling off of every vital process. Because of the formation and absorption of ptomaines and toxins



of varying degrees of virulence, there is always more or less vitiation of the blood and disintegration of its corpuscular elements. While the hæmolysis may not be extreme, it is generally sufficiently marked to leave no doubt that it is a prominent factor in determining the duration of convalescence and the completeness of recovery.

In regard to treatment it seems hardly necessary to speak of the importance of thorough antisepsis nor of the frequent necessity of removing decaying material These things are well appreciated by physicians generally. But what should be emphasized is the great importance of vigorous reconstructive treatment after miscarriages, in order to hasten the restoration of normal conditions, with all that this may mean on a woman's whole future health.

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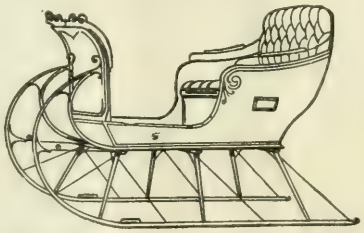

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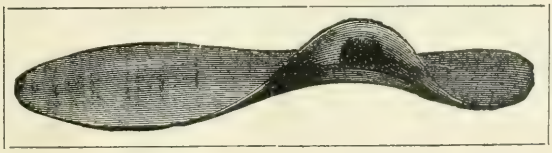

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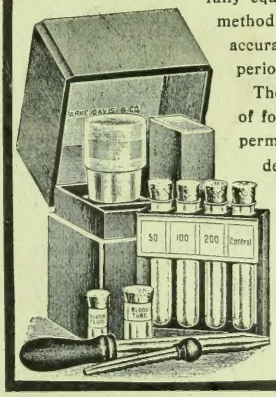

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